MINUTES
of the
FIFTH MEETING
of the
WATER AND NATURAL RESOURCES COMMITTEE

October 3-5, 2004
Silver City, Deming and Las Cruces

The fifth meeting of the Water and Natural Resources Committee was called to order at 9:10 a.m. on Monday, October 4, 2004, by Representative Joe M Stell, chair.

PRESENT
Rep. Joe M Stell, chair
Rep. Joseph Cervantes (Oct. 4 & 5)
Sen. Dede Feldman (Oct. 5)
Sen. Mary Jane M. Garcia (Oct. 5)
Rep. Dona G. Irwin
Rep. Larry A. Larranaga
Rep. Andy Nunez
Sen. Mary Kay Papen
Rep. Mimi Stewart

ABSENT
Sen. Carlos R. Cisneros, vice chair
Sen. Sue Wilson Beffort
Sen. Joseph J. Carraro
Rep. James Roger Madalena
Rep. Brian K. Moore
Sen. Shannon Robinson
Sen. H. Diane Snyder
Rep. Don Tripp
Rep. Robert White

Advisory Members
Rep. Anna M. Crook (Oct. 4 & 5)
Rep. Danice Picraux (Oct. 4 & 5)
Sen. Leonard Lee Rawson (Oct. 5)
Sen. Nancy Rodriguez (Oct 4 & 5)
Rep. Peter F. Wirth (Oct. 4 & 5)

Rep. Ray Begaye
Sen. Clinton D. Harden, Jr.
Sen. Timothy Z. Jennings
Sen. Gay G. Kernan
Rep. Rhonda S. King
Sen. Steve Komadina
Rep. Ben Lujan
Rep. Henry Kiki Saavedra
Sen. Leonard Tsosie
Rep. Eric A. Youngberg

(Attendance dates are noted for those members not present for the entire meeting.)

Staff
Jon Boller
Gordon Meeks
Jeret Fleetwood

Guests
The guest list is in the original meeting file.

Sunday, October 3

The committee met in Silver City to tour areas of the Gila Wilderness. Howard Hutchinson of the Association of Arizona and New Mexico Counties, who led the tour, took the committee to several different locations, including points along the Gila River, areas where habitat for endangered species has been greatly improved by efforts of the Nature Conservancy, a diversion structure built by Phelps Dodge for the company's Santa Rita Mine and a number of other sites that showcase how environmental, agricultural and other interests have worked together to improve the land.

Monday, October 4 — Deming

The committee began by having members of the audience, committee and staff introduce themselves.

Representative Stell thanked the community of Deming for hosting the committee and Representative Irwin for hosting a dinner held for the committee on Sunday evening.

WATER RIGHTS ADJUDICATIONS — JUDICIAL IMPROVEMENTS

Judge Gerald Valentine provided the committee with an update on the ongoing water adjudication process in New Mexico. He noted that he could not make public comments on cases that are pending, adding that not being able to communicate openly with all of the parties involved in stream adjudications is a problem sometimes. Judge Valentine also noted that a lack of communication exists between the courts and the legislature, suggesting that there should be increased communication between the two branches.

Judge Valentine went on to discuss the formation of water courts in New Mexico. He explained that a number of concepts were considered, and that creation of a water division within each of the 13 judicial districts in the state has been settled on as the strategy that would work best for New Mexico. Judge Valentine pointed out that while Colorado has dedicated water courts, such an arrangement works there because all of the surface water in the state has been adjudicated. He also noted that the Colorado water courts administer water rights in the state, as opposed to the state engineer performing that duty in New Mexico, adding that Colorado has the most expensive water administration system in the country. Judge Valentine explained that while water divisions in each judicial district will likely work better and cost less, training would be required for district judges to ensure that they understand the interconnected nature of water systems in New Mexico. He indicated that some training has already occurred, with more planned for late October, 2004.

Finally, Judge Valentine outlined the idea of creating a water claimant ombudsman in New Mexico. He explained that he believes one of the reasons water adjudications take so long is because of the large number of relatively unsophisticated and unrepresented water rights claimants, rather than real legal conflict, and that an ombudsman could help speed up the process by providing the public with education, information and assistance in understanding water law. Judge Valentine went on to note that the proposed ombudsman would not be part of the judicial

branch, but rather would fall under the executive. He suggested that the ombudsman could become part of the Office of Public Facilitation within the New Mexico Department of Environment (NMED), and he provided the committee with funding scenarios for the office.

Questions and comments focused on other potential agencies of state government that could house the water claimant ombudsman's office.

WATER CONSERVATION PLANS AND WATER BANKING

John D'Antonio, state engineer, provided the committee with testimony regarding water administration in New Mexico. He provided the committee with a brief outline of how the doctrine of prior appropriation forms the basis for water law in the state and how the Office of the State Engineer (OSE) is currently trying to manage the state's water resources through Active Water Resource Management (AWRM). Mr. D'Antonio went on to illustrate water use trends in New Mexico, noting that agricultural use has been declining while municipal, commercial and industrial use has steadily increased. He pointed out that AWRM is one means of developing solutions to manage those trends, particularly through its emphasis on water conservation and water planning.

Mr. D'Antonio stressed the importance of water conservation as one way to make better, more efficient use of the state's limited water resources. He noted that within the sector of municipal, commercial and industrial water use, residential use consumes the most water, pointing out that outdoor landscaping is one of the facets of residential use that provides a good opportunity to conserve a great deal of water. Mr. D'Antonio also discussed the development of water conservation plans, noting that such plans are a requirement of applicants for financial aid from the New Mexico Finance Authority and the Water Trust Board. He explained the various objectives of conservation plans, such as enhancing supply for continued growth, managing demand and balancing long- and short-term views of growth.

Finally, Mr. D'Antonio discussed water banking. He explained that recently enacted legislation allows for water banking along the Pecos River and that informal water banking arrangements exist for acequia and irrigation districts but are not regulated by OSE. Mr. D'Antonio also indicated that water banking may be best addressed by AWRM, particularly through replacement plans, which he said provide a mechanism for curtailed junior users to obtain senior water rights without senior users losing their water rights status.

Questions and comments included:

- the percentage of New Mexico's water resources used by agriculture;
- the definition of water use;
- offering a gross receipts tax credit for water conservation;
- the nature of declining agricultural use versus increasing municipal and industrial use; and
- the effects of drought and population growth on water resources.

Estevan Lopez, director of the Interstate Stream Commission (ISC), and Tanya Trujillo, legal counsel for the ISC, provided the committee with an overview of the agreement crafted between New Mexico and Arizona regarding the use of Gila River water. They explained that the agreement involves New Mexico reducing its water rights on the Gila River from 18,000 acre-feet to 14,000 acre-feet in exchange for $66 million to spend on water projects and greatly increases flexibility in how much water New Mexico is required to deliver to Arizona. Mr. Lopez and Ms. Trujillo went on to explain that the agreement is part of a large settlement of Native American water rights claims in Arizona. They also pointed out that the $66 million comes from the Lower Basin Development Fund, which consists of revenues paid by power generation plants and water users in the Lower Colorado River Basin, and that this amount could increase to as much as $128 million if New Mexico opts to authorize certain water projects and if interest rates allow the fund to grow to certain levels.

Questions and comments included:

- the chain of events between 2004 and 2012, when funding begins;
- how to begin projects before funding arrives;
- inclusion of the San Francisco River in the Gila agreement; and
- the rationale for giving up 4,000 acre-feet of water.

SOUTHWEST REGIONAL WATER PLAN

John Burkstaller, an engineer for Daniel B. Stevens, Inc., provided the committee with details of the proposed water plan for the southwestern corner of New Mexico. He outlined the basic requirements of regional water plans, such as determining how much water is available, how much will be needed and how best to meet demands for water. Mr. Burkstaller also discussed the process that must be undertaken in order to put a regional water plan in place, such as public involvement, legal issues, water supply assessment and water budgeting, which involves gaining an understanding of the inflow and outflow of water into and out of the region. He then applied the water planning guidelines to the counties that make up the southwestern region: Catron, Grant, Hidalgo and Luna. Mr. Burkstaller discussed water use and projected population growth in each of the counties, then showed how ground water basins, aquifer storage and recovery, the development of ground water resources and watershed management affect the region as a whole. Finally, Mr. Burkstaller noted some alternative means of managing the region's water resources that are receiving a limited amount of analysis, such as management of domestic wells, industrial conservation and rainwater harvesting.

Questions and comments included:

- how strictly 40-year water plans are adhered to; and
- using inverted block water rates to encourage conservation.

SOUTHWEST WATER PLANNING GROUP

Jack Hiatt, attorney for Grant County, provided the committee with an overview of the Southwest Water Planning Group. He explained that the group is made up of 16 political subdivisions — eight municipalities, four counties and four soil and water conservation districts — that have come together to help plan for future water projects in the area. Mr. Hiatt noted that the Gila River agreement requires congressional approval, and that until such approval is given, the planning group is keeping all its options open. He went on to explain that once the Gila River agreement is approved, the Southwest Water Planning Group faces difficult choices regarding what to do with the water in the Gila River and the money that comes from the Lower Basin Development Fund. Mr. Hiatt also pointed out that it is unlikely that there will be enough water in the Gila River to make transporting it to Deming, Lordsburg or Las Cruces feasible. He also stated that the political subdivisions that make up the Southwest Water Planning Group will likely move from a simple understanding between one another to a joint powers agreement.

Questions and comments included:

- moving water to Las Cruces if the city is able to pay large sums of money for it; and
- participation of environmental groups in the planning group.

WATER RESOURCE APPLICATION PROJECT FOR SOUTH CENTRAL NEW MEXICO

Tom Springer, vice chair of the South Central Mountain Resource Conservation and Development Council (RC&D), provided the committee with an overview of the Water Resource Application Project. He explained that the project began as a series of meetings designed to bring area water stakeholders together to try to work problems out in a fashion similar to the Pecos River Ad Hoc Committee, rather than seeking resolution through court proceedings. Mr. Springer went on to note that the goal of the project is to develop a consensus water plan to address the water shortage in south central New Mexico, and he provided the committee with a report on the progress of the project so far. He also pointed out that the project is not a water authority itself, nor an owner of water rights or water systems, but rather an attempt to develop and begin implementation of a plan for water use in the region. Finally, Mr. Springer indicated that a consensus watershed management plan has already been agreed upon, and showed the committee statistics on which individual watersheds would likely yield the greatest benefit to the region.

WATER AND LAND CONSERVATION TECHNIQUES TOUR

The committee was taken on a tour of several Deming-area farms that show the difference between flood irrigation, older drip irrigation systems and state-of-the-art drip irrigation systems. Owners of the older and state-of-the-art drip systems told the committee that they use significantly less water while yielding larger, more consistent crops as a result of drip irrigation systems. They also provided brief overviews of how the systems work, discussing system control, filtration, placement of the "drip tape" in fields and how the overall system affects the growth of crops such as pecans, green chile, cotton and sorghum.

Tuesday, October 5 — Otero Room, Corbett Center, New Mexico State University, Las Cruces

Chairman Stell thanked New Mexico State University for hosting a reception on Monday evening and for hosting the committee meeting.

Dr. Mike Martin, president of New Mexico State University (NMSU), welcomed the committee to NMSU, noting that water is as important an issue as any facing New Mexico. He also provided the committee with a brief history of land grant colleges, and NMSU in particular, explaining that the concept of land grant colleges broke with traditional higher education models. Dr. Martin went on to note that his administration seeks to carry on the land grant college tradition.

THE GILA — ECONOMICS AND ECOLOGY OF A FREE-FLOWING STREAM

Dutch Salmon, chair of the Gila Conservation Commission, provided the committee with a water plan he devised for the four-county area that comprises southwestern New Mexico. He explained that his plan would account for consumptive use and growth while at the same time protecting the free-flowing Gila River. Mr. Salmon outlined his plan for Catron, Grant, Hidalgo and Luna counties, noting the population and water resources in each county. He went on to point out that the Phelps Dodge Corporation, which operates the Tyrone and Santa Rita mines in southwestern New Mexico, holds roughly 11,000 acre-feet of water on the Gila River and another 25,000 acre-feet of water in the Mimbres Basin and only uses about 5,000 acre-feet in each area. Mr. Salmon suggested that New Mexico could use all or part of the $66 million from the settlement with Arizona regarding the Gila River to purchase additional water rights from Phelps Dodge to satisfy water needs for the region.

Questions and comments included:

- whether the Phelps Dodge water rights have been adjudicated;
- whether Phelps Dodge can be forced to sell its water rights to Silver City or the state;
- the model for re-allocating private water rights;
- the freezing of water rights in the San Francisco Basin; and
- seniority of New Mexico's water rights on the Gila to Arizona's water rights.

ON-SITE LIQUID WASTE ISSUES

Link Summers, president of the On-site Wastewater Reuse Association, provided the committee with an overview of some of the issues surrounding on-site liquid waste systems. He explained that on-site liquid waste systems are septic tanks, and that while 250,000 exist in New Mexico, only about half of them are regulated. Mr. Summers also noted that reusing wastewater could be a source of clean, though not necessarily potable, water. However, he pointed out that potable water is not necessary for all water uses. Mr. Summers went on to explain that while water conservation and reuse are becoming official policies in Colorado and California, New Mexico has not developed such a policy. He also criticized the NMED for developing wastewater reuse rules that he claims do not make sense, noting that the legislature may have to

eventually step in and establish reuse standards. Finally, Mr. Summers noted that NMED is seeking primacy over the National Pollutant Discharge Elimination System (EPDES) Permit Program, currently controlled in New Mexico by the federal Environmental Protection Agency (EPA), adding that he has doubts about whether NMED is capable of taking over such a program.

Questions and comments included:

- whether the local NMED office tries to influence the direction of business and steer economic decisions in the private sector;
- how septic tank technology is over 150 years old;
- possible changes to Wastewater Advisory Board;
- opposition to NMED assuming NPDES authority; and
- the need for certified wastewater treatment plant operators.

Gene Smith, owner of Las Cruces Environmental Systems, a company that produces advanced sewage treatment systems, explained that, currently, 78 million gallons of sewage are introduced into the soil in New Mexico every 24 hours, amounting to 28.5 billion gallons of sewage a year that seeps into ground water and contaminates it. He noted that the advanced treatment systems his company sells and installs can convert wastewater into usable water on a gallon-for-gallon basis, significantly reducing the amount of contaminants introduced into New Mexico's ground water. However, Mr. Smith complained that the NMED field office in Las Cruces is opposed to allowing any system other than traditional septic tanks. He went on to note that he had contacted Anna Marie Ortiz of the NMED, but that she has refused to help him. He did note that he would be meeting with the secretary of environment on October 27.

On a motion made, seconded and unanimously approved, the minutes of the August 10, 2004 meeting were approved as submitted.

On a motion made, seconded and unanimously approved, the minutes of the September 7, 2004 meeting were approved as submitted.

WATER RESOURCE PROTECTION ACT

Beth Bardwell of the World Wildlife Fund provided the committee with a proposal to add a surcharge to water use in New Mexico as a way to finance water projects. She noted that property tax increases, gross receipts tax increases and other revenue streams have been suggested as ways to finance such projects, but argued that a water use surcharge would work best, particularly because tying it to the amount of water used would encourage conservation while other potential funding streams would do little to modify behavior. Ms. Bardwell also provided the committee with a proposed fee schedule, emphasizing that she believes fees would be low for each user and fairly applied to all users. She also produced polling data from the University of New Mexico's Institute for Public Policy showing how concerned New Mexicans are about water and their relative support for a surcharge on water use.

Questions and comments included:

- the cost shift from agricultural users to domestic users;
- hardships created for various groups that would be forced to pay additional costs for water use;
- administrative costs of collecting the surcharge;
- who would decide how to spend the new revenue;
- applying the surcharge to irrigation districts that already collect money from their members for water projects;
- implementing the surcharge in addition to the money the state engineer wants to charge for the active water management rules;
- the fairness of the fee structure;
- imposing surcharges on water supplies that are not adjudicated; and
- allowing entities that would not be subject to the surcharge, such as Indian nations, tribes and pueblos, to make decisions about how the income would be spent.

DRIP IRRIGATION TECHNOLOGY — STATE OF THE ART

Dino Cervantes, a Las Cruces-area farmer, provided the committee with a discussion on the benefits he has seen by implementing drip irrigation technology. He explained why drip irrigation increases efficiency by outlining several of the factors that farmers must take into consideration when planning to irrigate, including hydrology, plant physiology, climate, environment and soil conditions and structure. Mr. Cervantes also discussed how plants actually use water to grow, contrasting the ability of drip irrigation systems to keep soil moisture near the optimum levels for growth with more traditional methods of irrigation and their inability to maintain those soil moisture levels. He also showed the committee examples of plants that have been traditionally irrigated and those that have been drip irrigated, noting the more advanced root structure and higher yield on the plants that have been drip irrigated. Mr. Cervantes went on to outline the economics of drip irrigation systems, explaining that while they do require a large capital investment up-front, they tend to pay off with higher crop yields and lower water use. Finally, Mr. Cervantes noted that only a small percentage of his crops in New Mexico are drip irrigated, partially because of the cost and partially because of his fear that reduced water use could lead to a smaller amount of water being adjudicated to him.

Questions and comments included:

- success of a drip irrigation project in Rincon, New Mexico;
- whether certain soil types work better with drip irrigation than others;
- how the legislature can encourage more farmers to switch to drip irrigation; and
- whether fields with drip irrigation are planted differently than traditionally irrigated ones.

There being no further business, the committee adjourned at 2:00 p.m.